GUJARAT TECHNOLOGICAL UNIVERSITY

Wireless Communications Networks and Systems (EC)

M.E. Semester: II

Subject Name: **Digital VLSI Design (Major Elective - III)**

Sr. No.	Course Content
1.	Introduction to VLSI design, MOS Physics, Structure and operation of MOSFETs, MOSFET Modelling, MOSFET Scaling, MOSFET Capacitances.
2.	Basics of Different fabrication Processes of MOS Integrated circuits, Processing Steps, Design Rules, Integrated Circuits Layout.
3.	Design and Analysis of different MOS Inverters, Design and Analysis of MOS combinational logic circuits, CMOS logic structures: Static and Dynamic Logic, Design and Analysis of Sequential Circuits.

Reference Book:

1. Sung-Mo-Kanf and Yusuf Leblebici, CMOS Digital Integrated Circuits, Tata McGraw Hill
2. N.Weste and K. Eshranghian, Principles of CMOS VLSI Design, Addison Wesley.
3. L.Glaser and D. Dobberpuhl, The Design and Analysis of VLSI Circuits, Addison Wesley.
4. C. Mead and L. Conway, Introduction to VLSI Systems, Addison Wesley.
5. J.P. Uyemura, Circuit Design for CMS BLSI, Kluwer
6. R.A.Geiger, P.E.Allen, N.R.Strader, VLSI Design Techniques for Anlog and Digital Circuits, McGraw Hill